

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 58488WO003	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/003259	International filing date (day/month/year) 26.03.2004	Priority date (day/month/year) 26.03.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant 3M ESPE AG		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input checked="" type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-9 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 12 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 4-11 _____ received by this Authority on 02.05.2005 with letter of 02.05.2005
- nos.* 1-3 _____ received by this Authority on 20.07.2005 with fax
- ☒ the drawings:
- sheets 1/2-2/2 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. II Priority

1. ☒ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☒ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: WO-A-03/007834.

Document D1 is considered to be the prior art closest to the subject matter of claim 1.

Said document discloses (the references in parentheses are to D1):

a method for processing data using the three-dimensional shape of a dental prosthesis (abstract), said method comprising the following steps:

- a) input data are supplied, said data representing a three-dimensional surface of the prepared tooth stump (claim 1, lines 1-4);
- b) minimal stability requirements for the prosthesis are supplied (page 8, lines 8 and 9);
- c) control data are generated from the input data, said control data representing a control surface that satisfies the minimum stability requirements (page 8, line 9);

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

- d) shape data are generated, said data representing the three-dimensional shape of the prosthesis (page 8, line 9).

Thus, the subject matter of claim 1 differs from the known method in that:

- e) the shape of the prosthesis is displayed together with the control surface on a monitor;
- f) the shape data are modified by the user on the basis of a visual comparison of the displayed shape data with the displayed control surface, in order that the minimum stability requirements can be satisfied; and
- g) the updated shape of the prosthesis is displayed together with the control surface.

The subject matter of claim 1 is consequently novel (PCT Article 33(2)).

The problem addressed by the present invention can thus be regarded as that of developing a method whereby a prosthesis can be shaped entirely by hand, in such a way that both aesthetic criteria and stability requirements are satisfied.

The solution to the above problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)) since the prior art neither discloses nor suggests displaying the prosthesis surface and the

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control surface together on a monitor. Instead, in the prior art, if the wall thickness is less than a minimum value an automatic correction is offered without the user being able to intervene with regard, for example, to aesthetic considerations (D1, page 8, lines 4-12).

Claims 2-11 are dependent on claim 1 and, therefore, likewise satisfy the requirements of the PCT in respect of novelty and inventive step.

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Independent claim 1 has not been drafted in the two-part form defined by PCT Rule 6.3(b).
However, in the present case the two-part form would appear to be appropriate. Accordingly, the features known in combination from the prior art (document D1) should have been placed in the preamble, and the remaining features specified in the characterising part.

2. Pursuant to PCT Rule 5.1(a)(ii), the description should have cited document D1 and briefly outlined the relevant prior art contained therein. The applicant should state clearly in the description which features of the subject matter of independent claim 1 are already known from document D1.